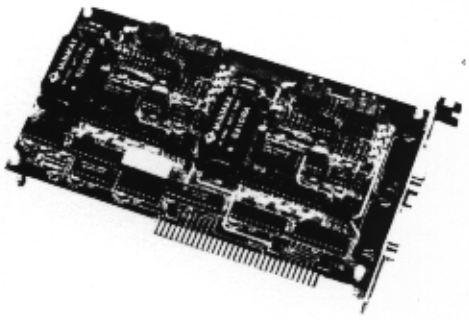
AX5213
2 Ch. Isolated Analog Output Board



Features

- IBM PC/XT/AT compatible analog output board
- Two channels of isolated analog output with 12-bit resolution
- 0 to 5V, 0 to 10V, -5 to 5V, -10 to 10V, 0 to 20mA or 4 to 20mA output ranges
- 500VDC isolated voltage

General Description

The AX5213 is an isolated analog output board, an IBM PC/XT/AT compatible member of AXIOM interface family, has two identical DAC channels, providing voltage output and 4-20mA current loop. The analog output is individually user selectable to any of the following ranges (unipolar or bipolar): 0V to 5V, 0V to 10V, -5V to +5V, or -10V to +10V, and is protected from shorts to ground.

Each channel has one 12-bit D/A converter. The analog outputs of both channels are connected out through two 9-pin D type connectors. Another feature of the AX5213 is user definable reference voltage input.

The voltage and current outputs of AX5213 are typically used as direct control value positioning, programmable voltage source or for generating signals to control material transfer rate, fluid flow, power consumption, motor speed, temperature levels, etc.

Specifications

Analog Output

- **Number of Channels:** 2
- **Output Current for All Ranges:** ±5mA max.
- **Output Ranges:** 0 to 5V, 0 to 10V, ±5V, ±10V, 4 to 20mA or 0 to 20mA current loop
- **Input Data Coding:** Straight binary (unipolar) Offset binary (bipolar)
- **Short Circuit Protection**
- **Voltage Output Source Impedance:** 0.1Ω max.

Accuracy

- **Resolution:** 12-bit
- **Nonlinearity:** ±1 LSB
- **Differential Nonlinearity:** ± 1/2 LSB
- **Inherent Quantizing Error:** ±1/2 LSB
- **Gain Error:** Adjustable to zero
- **Zero Error:** Adjustable to zero
- **System Accuracy:** ± 0.0125%FSR (Voltage) ± 0.02%FSR (Current)

Dynamic Performance

- **Settling Time to 1/2 LSB:** 10V step: 33µs 5V step: 16µs
- **Slew Rate:** 0.3V/µs typ. (Voltage) 1.2mA/µs (Current)
- **DAC Throughput Single Channel:** 50Hz

Thermal Characteristics

- **Zero Drift:** ±10µV/°C
- **Gain Drift:** ±20ppm of FSR/°C
- **Differential Linearity Drift:** ±3ppm of FSR/°C
- **Monotonicity:** Monotonic, 0 to +60 °C

Power Requirements

- **+12VDC** : 450mA
- **+5VDC** : 350mA

Physical/Environmental

- **Dimensions:** 178.5 × 99mm
- **Weight:** 163g
- **Connector:** Two 9-pin male D-type connectors
- **Operating Temperature Range:** 0 to +60 °C
- **Storage Temperature Range:** -25 to +85 °C
- **Relative Humidity:** 0 to 90%, non-condensing

Ordering Guide

- **AX5213** 2 Ch. Isolated Analog Output Board, including user's manual and two 9-pin D-type female connector